

## MIDLEVEL PERSONNEL IN OBSTETRICS AND GYNECOLOGY

practice was minuscule compared with the income generated because the cost savings were passed directly on to patients and overhead expenses were relatively high. At site B, a rather unique way of passing cost savings on to patients was achieved by *not* increasing office fees for three years. During these three years the average fee charged for five measurements of care by ten other obstetrician-gynecologists in Tacoma (who did not employ midlevel personnel) increased each year (Table 4). By 1977 all five fees charged at site B were *less* than the average charged by the ten other obstetrician-gynecologists in the same city. Thus, total health care cost at site B was lower in 1977, thereby benefiting *all* patients at that site. It is our contention that the use of midlevel personnel generates profits and keeps down all office fees, and that this best serves patients at a time when health costs are dramatically rising.

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## Propranolol for Lowering Serum Calcium

AN UNUSUAL GROUP of patients are those with hyperthyroidism who have hypercalcemia. If you control the hyperthyroidism with antithyroid drugs, of course you can control the hypercalcemia, but the control of hyperthyroidism takes weeks if not a month or two. If a patient is symptomatic with a calcium level of 12 or 13 ml per dl, you can give propranolol intravenously or even propranolol orally in higher doses. It very nicely and acutely lowers the serum calcium. You stop the infusion, and back up goes the calcium. It is felt that the effect of excessive thyroid hormone is on the bone cells directly, stimulating resorption activity of bone cells, and that this is mediated through the beta-adrenergic system. Hence, propranolol can rapidly reverse that effect. . . . We do not see these patients very often, but it is a very nice effect if one is faced with such a patient.

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